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EXAMINER

MCLEAN, NEIL R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Status of Claims

1. Claims 4, 11 and 27-42 are pending in this application.
Independent Claims 4, 11, 32 and 37 have been amended.
Claims 39-42 are added.

Response to Arguments

2. Regarding Applicant's Argument:

"Claim 4 has been amended to recite a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer. Claim 4 has also been amended to recite that the display unit is configured to display information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit."

Examiner's Response:

Suzuki does not disclose expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer, and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print

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process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit.

Fritz discloses expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer, and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit. (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer. The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would

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be wasted by the user. Therefore, it would have been obvious to combine Fritz with Suzuki to obtain the invention as specified.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 11 and 27-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 6,104,886) hereinafter 'Suzuki', in view of Fritz et al. (US 7,324,226), hereinafter 'Fritz'.

Regarding Claims 1-3: (Canceled)

Regarding Claim 4: (Currently Amended)

Suzuki discloses a digital camera (101 in Figures 1 and 2) which can be directly connected (Communication Cable 23 in Figures 1 and 2) to a printer (102 in Figures 1 and 2), and has a function of directly transmitting a plurality of images to the printer, comprising:

a selection unit configured to select a plurality of images to be printed (The operation switches 12 comprise a reproduction mode switch 12a for instructing display of an LCD 7, and switches 12b and 12c for selecting image frames to be displayed as described in Column 4, lines 29-31);

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a print instruction transmitting unit (The communication driver 11 is connected to a communication driver 13 of the digital color printer 102 via the communication cable 23, thereby enabling mutual communication as described in Column 4, lines 42-45) configured to transmit, to the printer, a print instruction indicating that the plurality of images selected by said selection unit are to be printed (The CPU 14 is connected to a print start switch 22 which is operated by the operator to instruct start of print. The print start switch 22 is disposed, for example, at a position shown in FIG. 2. The print start switch 22 may be provided on the digital camera 101 as described in Column 5, lines 3-7);

an image transmitting unit (communication between the communication drivers 11 and 13 may be established not only by the communication cable 23 but also by other conventional communication means such as infrared or radio communication as described in Column 5, lines 11-15) configured to transmit, in response to receiving from the printer a request for transmitting an image to be printed, the requested image to the printer (The CPU 14 of digital color printer 102 receives image file data from the camera 101 as described in Column 5, lines 48-50);

a display unit configured to display, information indicating that the communication between the digital camera and the printer may disconnect before completion of a print process, by the printer, of the images to be printed (LCD 7 in Figure 3).

Suzuki does not disclose expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer, and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit.

Fritz discloses expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer (The printer 102 issues a print end signal to the digital camera 101 and the print operation is finished as described in Column 7, lines 59-61), and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit. (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer. The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user. Therefore, it would have been obvious to combine Fritz with Suzuki to obtain the invention as specified.

Regarding Claim 32: (Previously Presented)

Claim 4 teaches the apparatus. Claim 32 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 4.

Regarding Claims 5 – 10: (Canceled)

Regarding Claim 11: (Currently Amended)

Suzuki discloses an image input apparatus (101 in Figures 1 and 2) which can be directly connected (Communication Cable 23 in Figures 1 and 2) to a printer (102 in Figures 1 and 2), and has a function of directly transmitting a plurality of images to the printer, comprising:

a selection unit configured to select a plurality of images to be printed (The operation switches 12 comprise a reproduction mode switch 12a for instructing display of an LCD 7, and switches 12b and 12c for selecting image frames to be displayed as described in Column 4, lines 29-31);

a print instruction transmitting unit (The communication driver 11 is connected to a communication driver 13 of the digital color printer 102 via the communication cable 23, thereby enabling mutual communication as described in Column 4, lines 42-45) configured to transmit, to the printer, a print instruction indicating that the plurality of images selected by said selection unit are to be printed (The CPU 14 is connected to a print start switch 22 which is operated by the operator to instruct start of print. The print start switch 22 is disposed, for example, at a position shown in FIG. 2. The print start switch 22 may be provided on the digital camera 101 as described in Column 5, lines 3-7);

an image transmitting unit (communication between the communication drivers 11 and 13 may be established not only by the communication cable 23 but also by other conventional communication means such as

infrared or radio communication as described in Column 5, lines 11-15) configured to transmit, in response to receiving from the printer a request for transmitting an image to be printed, the requested image to the printer; and

a display unit configured to display, information indicating that the communication between the image input apparatus and the printer may disconnect, before completion of a print process, by the printer, of the images to be printed.

Suzuki does not disclose expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer, and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit.

Fritz discloses expressly a reception unit configured to receive from the printer a reception end message indicating that all the images to be printed have been received by the printer (The printer 102 issues a print end signal to the digital camera 101 and the print operation is finished as described in Column 7, lines 59-61), and information indicating that the communication between the digital camera and the printer can disconnect before completion of a print process, by the printer, of the images to be printed, in response to receiving the reception end message by the reception unit. (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

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Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer. The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user. Therefore, it would have been obvious to combine Fritz with Suzuki to obtain the invention as specified.

Regarding Claim 37: (Previously Presented)

Claim 11 teaches the apparatus. Claim 37 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 11.

Regarding Claims 12-26: (Canceled)

Regarding Claim 27: (Previously Presented)

Suzuki discloses the digital camera according to Claim 4,

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Suzuki does not disclose expressly in response to receiving from the printer a print completion message indicating that all of the images have been printed after receiving the reception end message, said display unit prompts the user to select another image to be printed.

Fritz discloses expressly in response to receiving from the printer a print completion message indicating that all of the images have been printed after receiving the reception end message, said display unit prompts the user to select another image to be printed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer.

The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user.

Regarding Claim 33: (Previously Presented)

Claim 27 teaches the apparatus. Claim 33 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 27.

Regarding Claim 28: (Previously Presented)

Suzuki discloses the digital camera according to Claim 4,

Suzuki does not disclose expressly wherein said display unit displays information indicating that the user may disconnect the digital camera and the printer and may operate the digital camera for sensing an image in response to receiving the reception end message from the printer.

Fritz discloses expressly wherein said display unit displays information indicating that the user may disconnect the digital camera and the printer and may operate the digital camera for sensing an image in response to receiving the reception end message from the printer. (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit

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and the printer, and if there is no connection the cable can be detached and the camera can be used to sense an image.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer.

The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task such as the sensing of an image instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user.

Regarding Claim 34: (Previously Presented)

Claim 28 teaches the apparatus. Claim 34 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 28.

Regarding Claim 29: (Previously Presented)

Suzuki discloses the digital camera according to Claim 4, however

Suzuki does not disclose expressly wherein the digital camera and the printer are connected by a cable, and said display unit displays information indicating that the cable can be disconnected in response to receiving the reception end message from the printer.

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Fritz discloses expressly wherein the digital camera and the printer are connected by a cable, and said display unit displays information indicating that the cable can be disconnected in response to receiving the reception end message from the printer. (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer. The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user.

Regarding Claim 35: (Previously Presented)

Claim 29 teaches the apparatus. Claim 35 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 29.

Regarding Claim 30: (Previously Presented)

Suzuki discloses the digital camera according to Claim 4,

Suzuki does not disclose expressly wherein the digital camera and the printer are connected via a wireless interface, and said display unit displays information indicating that the camera can be brought outside a wireless communication area of the printer in response to receiving the reception end message from the printer.

Fritz discloses expressly wherein the digital camera and the printer are connected via a wireless interface (A bi-directional wireless asynchronous connection-less (ACL) connection is established (701) between the processing unit and the printer. This is achieved by means of the printer protocol in the processing unit calling the L2CAP in the within the same unit, requesting the connection to the printer. The printer is connected e.g. by means of the printer address being one of the attributes received. The L2CAP creates the connection and notifies the created connection the printer protocol as described in Column 9, lines 11-19), and said display unit displays information indicating that the camera can be brought outside a wireless communication area of the printer in response to receiving the reception end message from the printer (After performing one or more print jobs or if a break of the print job is requested, the client requests a disconnection of a session defined by the session identifier. Depicted in FIG. 13d, this request is performed by e.g. sending a denoted WPP Disconnect Req message 1313 from the WPP client 1001 to the WPP server 1002 and a response, whether the disconnection is granted or not, is sent in the opposite direction in a denoted WPP Disconnect Req message 1314; Column 11, lines 28-38).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit

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and the printer, and if there is no connection the cable can be detached. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer. The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user.

Regarding Claim 36: (Previously Presented)

Claim 30 teaches the apparatus. Claim 36 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 30.

Regarding Claim 31: (Previously Presented)

Suzuki discloses the apparatus according to Claim 11, however

Suzuki does not expressly disclose in response to receiving from the printer a print completion message indicating that all of the images have been printed after receiving the reception end message, said display unit prompts the user to select another image to be printed.

Fritz discloses expressly in response to receiving from the printer a print completion message indicating that all of the images have been printed after receiving the reception end message, said display unit prompts the user to select another image

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to be printed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the print job. The stopping device 520 will be used when all data to be printed in a print job is sent to the printer as disclosed in Column 6, lines 11-16).

Suzuki & Fritz are combinable because they are from the same field of endeavor of image processing; e.g., both send image data to a printer.

Since it is obvious to a person with ordinary skill in the art that by closing the connection means that there is no more communication between the processing unit and the printer, and if there is no connection the cable can be detached.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include Fritz 's feature of notifying the client that a disconnect can occur when all of the image data has been received by e.g., the printer.

The suggestion/motivation for doing so would have been to allow the user to disconnect any cables or to move on to another task instead of waiting for the printer to finish printing. If the printer had a lot of data to print and the user had to wait until the printer is done printing, considerable time would be wasted by the user.

Regarding Claim 38: (Previously Presented)

Claim 31 teaches the apparatus. Claim 38 is obvious in view of Fritz and Suzuki because the operation of the apparatus is achieved using the steps of Claim 31.

Regarding Claim 39: (New)

Fritz further discloses the digital camera according to Claim 4, wherein, after the printer sends to the digital camera the reception end message indicating that all the images to be printed have been received by the printer, the printer continues the print process until the print process for all the images to be printed is completed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the printjob. The stopping device 520 will be used when all data to be printed in a printjob is sent to the printer; Column 6, lines 11-16).

Regarding Claim 40: (New)

Fritz further discloses the image input apparatus according to Claim 11, wherein, after the printer sends to the image input apparatus the reception end message indicating that all the images to be printed have been received by the printer, the printer continues the print process until the print process for all the images to be printed is completed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the printjob. The stopping device 520 will be used when all data to be printed in a printjob is sent to the printer; Column 6, lines 11-16).

Regarding Claim 41: (New)

Fritz further discloses the method of controlling a digital camera according to Claim 32, wherein, after the printer sends to the digital camera the reception end message indicating that all the images to be printed have been received by the printer, the printer continues the print process until the print process for all the images to be

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printed is completed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the printjob. The stopping device 520 will be used when all data to be printed in a printjob is sent to the printer; Column 6, lines 11-16).

Regarding Claim 42: (New)

Fritz further discloses the method of controlling an image input apparatus according to Claim 37, wherein, after the printer sends to the image input apparatus the reception end message indicating that all the images to be printed have been received by the printer, the printer continues the print process until the print process for all the images to be printed are completed (The entity 501 comprises a stopping device 520 arranged for stopping the print job said stopping device 520 comprises a sending device 521 arranged for sending a message to the printer server, the message comprising a request to stop the printjob. The stopping device 520 will be used when all data to be printed in a printjob is sent to the printer; Column 6, lines 11-16).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Battles et al. (US 2003/0210331) discloses a digital camera comprising an optical system for forming an optical image, an image conversion system responsive to the optical image for storing image data, a user interface configured to direct a processing of the image data and a communications interface for receiving user definition data for configuring an operation of the user interface.

Examiner Notes

6. The Examiner cites particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully considers the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or as disclosed by the Examiner.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. McLean whose telephone number is (571)270-1679. The examiner can normally be reached on Monday through Friday 7:30AM-4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571.272.7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Neil R. McLean/
Examiner, Art Unit 2625

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/David K Moore/

Supervisory Patent Examiner, Art Unit 2625